



NUCLEAR REGULATORY COMMISSION

[NRC-2021-0089]

Integrated Human Event Analysis System for Event and Condition Assessment

Method and Software Tool

AGENCY: Nuclear Regulatory Commission.

ACTION: Public meeting and request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is requesting comments on its Integrated Human Event Analysis System for Event and Condition Assessment (IDHEAS-ECA) method and software tool for human reliability analysis applications.

DATES: Submit comments by July 30, 2021. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date. The NRC will hold a public meeting as an online webinar. See Section IV Public Meeting, of this document for additional information.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal Rulemaking Web Site**:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2021-0089**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; e-mail: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Yung Hsien James Chang, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-2378, e-mail: James.Chang@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID **NRC-2021-0089** when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2021-0089**.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The IDHEAS-ECA research information letter (RIL) is available in ADAMS under Accession No. ML20016A481.

- **Attention:** The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via e-mail at pdr.resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the **Federal Rulemaking Web Site** (<https://www.regulations.gov>). Please include Docket ID **NRC-2021-0089** in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

The NRC has developed the IDHEAS-ECA human reliability analysis (HRA) method with a plan to replace the SPAR-H HRA method (NUREG/CR-6883) currently in use for risk-informed applications. The IDHEA-ECA method was developed based on the IDHEAS-G methodology, Draft, NUREG-2198, "The General Methodology of an Integrated Human Event Analysis System (IDHEAS-G)" (ADAMS Accession No. ML20238B988). IDHEAS-G provides all technical components required to develop application-specific HRA methods. IDHEAS-ECA modifies some of the technical components for the event condition assessment of the significance determination process. The NRC collects human reliability data to support the IDHEAS-ECA development. The data is documented in the Integrated Human Event Analysis System for Human Reliability Data (IDHEAS-DATA) report, Draft RIL-2021-XX, "Integrated Human Event Analysis System for Human Reliability Data (IDHEAS-DATA)" (ADAMS Accession No. ML20238B982). An important data source to the IDHEAS-DATA is the

NRC's Scenario Authoring, Characterization, and Debriefing Application (SACADA) project, is available in ADAMS under Accession No. ML17164A077, that collects operator performance information in simulator training. The IDHEAS-G, IDHEAS-DATA, and SACADA are foundation of IDHEAS-ECA.

III. Specific Considerations

IDHEAS-ECA is currently published as a RIL and is planned to be published as a NUREG report after addressing the public comments from this *Federal Register* notice. IDHEAS-ECA is an HRA method. The software tool (IDHEAS-ECA v1.1) is used to perform the calculations of the IDHEAS-ECA method. The NRC developed the IDHEAS-ECA software tool in-house and has all the rights to distribute the software licenses. The software is available for all U.S. citizens, but its availability to foreign citizens is decided on a case by case. To obtain a copy of the software, send an e-mail to Y. James Chang (James.Chang@nrc.gov) on the subject line state "Request for IDHEAS-ECA software license." In the e-mail include the requestor's name, e-mail address, company, and nationality. Once the NRC determines to issue the free software license to the requester, the requester will receive an e-mail from Dropbox, along with the instruction to download the software.

IV. Public Meeting

The NRC plans to hold a public meeting during the public comment period for this action. A public meeting is planned for April 8, 2021, via webinar. The NRC will present information about IDHEAS-G, IDHEAS-DATA, SACADA, and IDHEAS-ECA method and software tool during the public meeting. The information would facilitate having a holistic understanding of the IDHEAS-ECA development.

The public meeting will provide a forum for the NRC staff to discuss issues and questions with members of the public. The NRC does not intend to provide any responses to comments submitted during the public meeting. The public meeting will be noticed on the NRC's public meeting website at least 10 calendar days before the meeting. Members of the public should monitor the NRC's public meeting website for

additional information about the public meetings at <https://www.nrc.gov/public-involve/public-meetings/index.cfm>. The NRC will post the notices for the public meetings and webinars and may post additional material related to this action to the Federal Rulemaking website at <https://www.regulations.gov/> under Docket ID **NRC-2021-0089**. The Federal Rulemaking website allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) Navigate to the docket folder (**NRC-2021-0089**); (2) click the "Sign up for Email Alerts" link; and (3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

Dated: April 5, 2021.

For the Nuclear Regulatory Commission.

Sean E. Peters, Chief,
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[FR Doc. 2021-07214 Filed: 4/7/2021 8:45 am; Publication Date: 4/8/2021]